Project Number:	636
Category:	Environmental Issues
Date:	June 2011
Subject:	*Characteristics, Behavior, and Response Effectiveness of Spilled Dielectric Insulating Oil in the Marine Environment*
Performing Activity:	Louisiana State University
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Contracting Agency:	Bureau of Safety and Environmental Enforcement
Summary:	Offshore wind farms may use more than 40,000 gallons of dielectric fluids, primarily in the electric service platforms (ESPs), which may pose a hazard to the environment. This study was performed to assess the characteristics and behavior of the fluids when they are spilled into the ocean and to evaluate spill response measures. The study included research, laboratory, and field experiments.
Key Findings:	• Properties of typical dielectric insulating oil for offshore turbines (MIDEL 7131) were determined. • MIDEL 7131 is nearly 100% dispersible. • A disc skimmer recovery system could effectively remove MIDEL 7131 from the water surface. • Detection of MIDEL 7131 would be difficult under normal sea conditions because of its lack of color and fluorescence.
Recommendations:	• Further research is needed of the detection of spilled dielectric fluids in the marine environment.
Subsequent Studies/Activities:	• Evaluate the potential use in Cape Wind and other offshore wind projects in their spill response plans. • This study was referenced in *OCS BOEM 2013-213* "Literature Review of the Environmental Risks, Fate, and Effects of Chemicals Associated with Wind Turbines on the Atlantic Outer Continental Shelf," September 2013.
Report Link:	AA: Final Report: "Characteristics, Behavior and Response Effectiveness of Spilled Dielectric Insulating Oil in the Marine Environment"